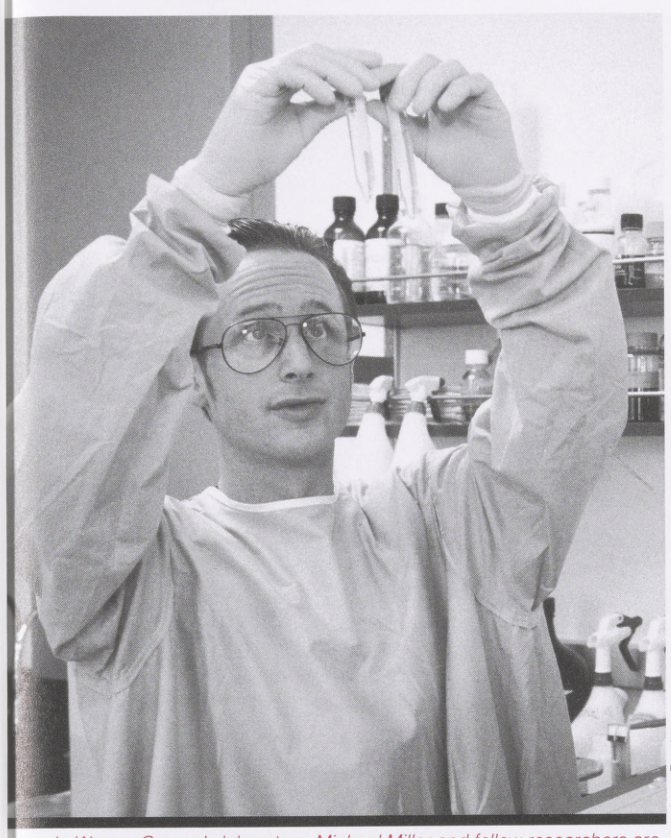
May/June 1993 Volume 18, Number 3

A summary of recent news stories from the University of California, San Francisco

UCSF

News for You

New AIDS Center at SFGH Starts Cracking the Mystery of AIDS



Anne Dowie

In Warner Greene's laboratory, Michael Miller and fellow researchers are studying the factors that stimulate early and late phases in HIV replication.

Researchers at UCSF and SFGH are taking a fresh approach to understanding HIV through a new AIDS Research Center that was dedicated on April 19. The Gladstone Institute of Virology and Immunology is the second largest basic AIDS research unit in the country — after NIH — focused on cracking the mystery of AIDS.

The new center is a unique collaboration between the city, state, UCSF and the J. David Gladstone Institutes, a private charitable trust based in Los Angeles, which has made a long-term commitment, including $28 million over the first five years.

Researchers at the new center aim to understand the inner workings of the virus in "exquisite detail" and hope to provide new leads for novel drugs designed specifically to inhibit the growth of HIV, says Warner Greene, the molecular biologist and physician who directs the center. Most current therapies for treating HIV and its related infections are of limited benefit and were not specifically designed with the virus in mind but rather were developed to fight other diseases.

The center's five principal investigators, recruited from around the country, are each approaching the virus from a different perspective, tackling it at virtually every stage of its life cycle. The hope is to identify critical points in the process and develop the basis for new drugs that could stop the virus's destructive path.

School of Nursing, *SELF* Magazine Present a Full Day on Women's Health

For the first time ever, the UCSF School of Nursing and *SELF* magazine are joining forces to present the first of an annual series of workshops on women's health. The first series will focus on "Breast Health," and will be held on Saturday, May 8, from 9 a.m. to 4 p.m. in various locations on the UCSF Parnassus campus. Registration will be at 9 a.m. and at 1 p.m. in the Medical Sciences lobby, 513 Parnassus Avenue.

"The workshops to be presented that day will not just have to do with breast self exams," explains Zina Mirksy, associate dean of the School of Nursing. "They will include information of more general concern to the health of women and their families." Topics will range from nutrition and menopause, to estrogen replacement and mammography; from breast disease and its treatment, to selecting the right child care center; from breast feeding, to the latest in contraception and safe sex.

SELF magazine is sponsoring these lecture series at top nursing schools throughout the country. The UCSF School of Nursing is California's representative. The May 8 workshops will be co-sponsored by the Office of Public Service Programs, and will run concurrently and repeatedly throughout the day with presentations from a variety of UCSF health care professionals. "You will be able to take in all the lectures by just spending a few hours on campus," Mirsky adds.

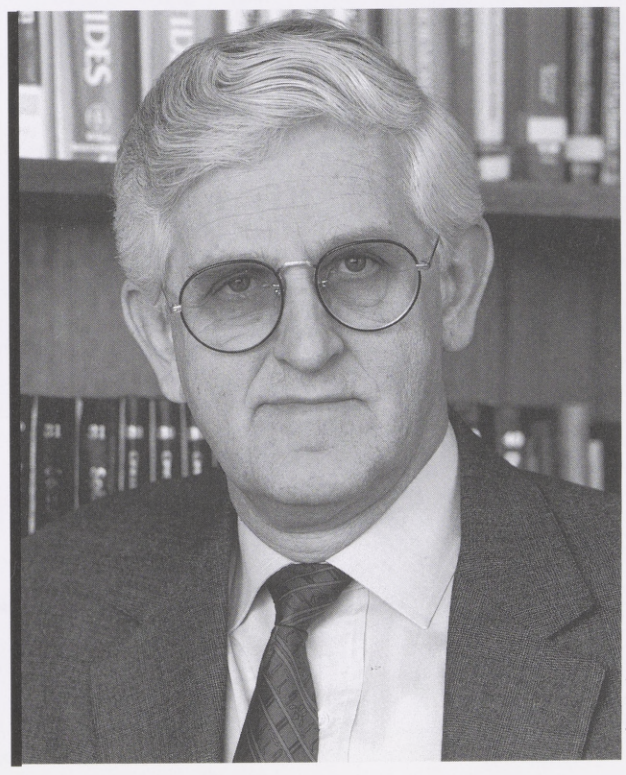
Pre-registration is required. Call 502-UCSF (8273). A voice mail message will tell you more about the health education to be offered throughout the day, and will allow you to leave a message. (Bring this article with you, and park for only $2.)

Martin is UCSF's New Chancellor

Joseph B. Martin, who has been dean of the UCSF School of Medicine since 1989, has been appointed the new chancellor of UCSF. Martin will succeed Julius R. Krevans who retires July 1 after serving as chancellor for 11 years.

Martin is credited with recruiting a number of distinguished physicians and scientists and for bringing people together in a positive way during a time of shrinking resources. Known internationally for his work in neuroscience and neurology, he also holds an appointment as professor of neurology. His research has focused on the use of molecular genetics to better understand the causes of neurological and neurodegenerative disease.

In 1989 he was chosen by the Institute of Medicine of the National Academy of Sciences to chair a prestigious committee on "mapping the human brain." Its goal is to use computer technology to link hundreds of researchers now trying to better understand the functions of the brain and to solve the mysteries of neurological diseases, such as Alzheimer's, Parkinson's disease and schizophrenia. The committee's report, published in 1991, now serves as a major guide for policymakers and federal agencies responsible for supporting and directing this country's biomedical research.



Jan Standerfer

In Brief

Free Medications to Patients in Need

A program recently initiated at the UCSF outpatient pharmacy is helping financially strapped patients obtain for free medication that often costs thousands of dollars. Patients who can most benefit from the program are typically those whose medical insurance does not cover drugs, or the particular medications needed for an illness, for example those suffering from AIDS.

The program is made possible by a one-year funding grant from Ortho Biotech. For further information, UCSF patients should call 502-3261.

Alzheimer's Patients Needed for Study

The UCSF School of Nursing is seeking male and female Alzheimer's patients and their caregivers for a six-week study on sleep disruption. Participants will receive $100 reimbursement. Alzheimer's subjects must be age 65 or over, live in the community and be cared for primarily by one person. For further information, call 476-4651.

Volunteers Needed for Diabetes Research

Volunteers are needed by the UCSF Metabolic Research Unit for a study of a new oral medication for type II, adult-onset diabetes, a disease affecting nearly 9 million people in the U.S. alone. The study will test the drug CI-991, a thiazolidinedione, which enhances insulin action in muscle and liver cells. Healthy adults, who presently are participating in a stable diabetes treatment regimen, may be eligible. For further information, call 476-7265 and ask for the research nurse.

Dietary Cholesterol Study

If you are a healthy, non-smoking man or woman between the ages of 50 and 70, or a healthy, non-smoking male between the ages of 25 and 35 you might be eligible for an outpatient nutrition study. The six-week study will investigate what effect the amount of dietary cholesterol and various types of fat in the diet have on cholesterol levels. All food will be provided by the research kitchen of the UCSF General Clinical Research Center. For further information, call 476-7931.

UCSF at Top in NIH Ratings

Each of the four UCSF schools is once again at or near the top among its sister institutions in National Institutes of Health funding for the 1992 fiscal year. NIH awarded UCSF 678 awards totalling $165.7 million, an increase of $16.2 million over 1991. The rankings of the schools remained the same for nursing — third with 37 awards totalling $3,967,000 — and pharmacy — first with 59 awards totalling $12,500,000 — while dentistry rose from fourth to first with 30 awards totalling $5,680,000. For the first time in 19 years, the School of Medicine fell from first to second with 552 awards totalling $143,537,000.

More News for You

on the back page

What's happening

May/June 1993
A bimonthly calend
events at UC San F

Special Events

Sponsored by Arts & Performances, unless otherwise noted.

Fri., May 7
Rhythm & Blues for Bolivia. Benefit dance to help supply UCSF medical students with health education supplies for a teaching trip to Bolivia this summer. Co-sponsored by the Cordillera Proj. & Outdoors Unlimited. $5-$10. Millberry Conf. Cntr., 500 Parnassus. 8 p.m. Call 476-2078.

Sat., May 8
Breast Health Day. Learn about breast self-exams, menopause, child care, contraception, safe sex & more. Co-sponsored by *SELF* magazine, UCSF School of Nursing & Public Service Prog. 9 a.m.-4 p.m. Parking available for $2 with this calendar. Register in Medical Sciences Bldg., 513 Parnassus. Call 502-UCSF to pre-register. (See story on page 1.)

Health Access for Hispanics: Our Challenge. How can health professionals remove barriers to health care for Hispanics? Sixth Annual Hispanic Nursing Symposium sponsored by UCSF School & Dept. of Nursing. $5. Free for students with ID. Cole Hall, 513 Parnassus. 9 a.m.-4 p.m. Call 476-4897.

Tues., May 11
Elder Care Fair. Over 20 Bay Area agencies who provide services for the elderly will be represented. Sponsored by UCSF Child & Elder Care Referral Serv. Millberry Conf. Cntr., 500 Parnassus. Noon-2 p.m. Call 476-2692.

Fri., May 14
Friday Afternoon Poetry. Readings by physician H. David Watts & other campus poets. Toland Hall, 533 Parnassus. 4 p.m.

Sun., May 23
Save-A-Life Sunday at the Zoo. Learn CPR & get free admission to the San Francisco Zoo. Co-sponsored by the Center for Prehospital Training. Two sessions: 9 a.m. & 10 a.m. Call 1-800-GIVE CPR.

Thurs., May 27
UCSF Orchestra Concert. Performance dedicated to Chancellor & Mrs. Julius R. Krevans features jazz saxophonist John Handy performing his own *Concerto for Saxophone & Orchestra.* Also on the program is Prokofiev's *Symphony No. 5.*
Herbst Theater, 401 Van Ness. $7-$20. 8 p.m. Call 476-2542.

Sat., June 19
Children's Concert. Features music from around the world. Millberry Gym, 500 Parnassus. $3/5. 2 p.m. Call 476-2542.

Founders Day Events

Tues., May 18
The Paradox of Policy: Aging Research & the Adventures of an Academic on the Policy Frontier. Carroll L. Estes, Social & Behavioral Sci. & Inst. Hlth. & Aging, presents the Academic Senate 36th Annual Faculty Research Lecture. Cole Hall, 513 Parnassus. 2 p.m.

Wed., May 19
A Generation of Science & Innovation. Faculty symposium in honor of Chancellor Julius R. Krevans on his retirement. Cole Hall, 513 Parnassus. 9 a.m.-12:15 p.m. Followed by unveiling of Krevan's portrait at 2 p.m. UCSF Library, 530 Parnassus.

Founders Day Banquet. Chancellor Krevans & Carroll L. Estes to be honored. 125th anniversary of UC's founding celebrated. $50. Westin St. Francis Hotel. 7 p.m. Call 476-2401.

Celebrating the Week of Cinco de Mayo

Wed., May 5
The Public in Public Education. Waldemar "Bill" Rojas, S.F. Superintendent of Schools. A Brown Bag Lecture sponsored by Campus Tours/Speakers Bureau. Rm. 300, Health Sciences West, enter through 513 Parnassus. Noon-1 p.m.

Thurs., May 6
Latinas in the Media. Rose Del Castillo Guilbault, KGO-TV. Co-sponsored by the Women's Resource Center. 533 Parnassus. Noon.

Fri., May 7
Plaza Pulse. Altazor performs Latin American "neuva cancion" as part of this monthly noontime concert series sponsored by Arts & Performances. Plaza Grill, 500 Parnassus. Noon.

Great Expectations Programs for Parents

The UCSF Birth Center offers special classes & video presentations for expectant parents on Wednesdays. Rm. 326, Ambulatory Care Center, 400 Parnassus. 7-8:30 p.m. Call 476-MOMS for registration & information. Also call for details about S.F. Mothers of Twins Club.

May 19
Childbirth Choices: Options for Labor & Birth. Video presentation of "Special Delivery."

June 16
Combining Work & Family. Video presentation of "The Working Mother's Survival Guide."

Breast Cancer Screening

Women can have low-cost mammograms — X-rays to screen for breast cancer — from a mobile van that travels to convenient Bay Area locations. The procedure takes approximately 20 minutes and costs $60. Your physician's approval is required, plus his/her full name, address & telephone number to assure results are mailed promptly. Appointments must be made at least one month to six weeks in advance. Find out when the van will be in your neighborhood by calling 476-2193 between 9 a.m. and 3 p.m., Monday through Friday. A $50 mammography screening also is available at the UCSF/Mount Zion Medical Center Radiology Department. Call 885-7710.

Look Good, Feel Better

This program provides expert advice on makeup, wigs & the use of turbans to people who have undergone chemotherapy or radiation and have lost or are losing their hair. Held the first Monday of each month in the 11 Long Solarium, Long Hospital, 505 Parnassus. Co-sponsored by the American Cancer Society and supported by the Donna Smith Fund. Call 476-1383.

Your Growing Child

The last in a series of free lecture/discussions sponsored by Child & Elder Care Referral Service, Community Health Talks, Marilyn Reed Lucia Child Care Study Center, Great Expectations & Women's Resource Center. Cole Hall, 513 Parnassus. 7-9 p.m. Parking available for $2 with this calendar. Call 476-6667 to register.

Wed., May 5
Building Pint-Sized Confidence: How to Develop Self-Esteem in Infants & Toddlers.

Asian Pacific Awareness Week

UCSF celebrates Asian Pacific Awareness Week with the following events.

Mon., May 10
Yan Can Cook. Chef Martin Yan entertains & demonstrates Chinese cooking techniques. Toland Hall, 533 Parnassus. Noon-1 p.m.

Tues., May 11
Suffering from the Sandwich Syndrome? David Ishida, S.F. Commission on Aging, on caring for parents & children. Millberry Conf. Cntr., 500 Parnassus. Noon-1:30 p.m.

Wed., May 12
"Women of the Silk." Gail Tsukiyama reads from her novel which recounts the struggle for independence of two women in rural China. Co-sponsored by Women's Resource Cntr. Toland Hall, 533 Parnassus. Noon-1 p.m.

Thurs., May 13
Fri., May 14
Asian Pacific Festivals. Food, arts & crafts & entertainment. Co-sponsored by Arts & Performances & EMPACT! Thurs.: Millberry Gym, 500 Parnassus. Noon-1:30 p.m. Fri.: Mission Cntr. Bldg., 1855 Folsom. Noon-1 p.m.

Fri., May 14
Filipino Festival. Traditional Filipino food, arts & crafts & entertainment. Co-sponsored by Health Educ. & Mobilization for Philipinos & United Filipino Employee's Assn. Millberry Gym, 500 Parnassus. Noon-1:30 p.m.

Wed., May 19
A Hyphenated Life. Ben Fong-Torres discusses the personal journey of a Chinese-American journalist-broadcaster. A Brown Bag Lecture sponsored by Campus Tours/Speakers Bureau. Rm. 300, Health Sciences West, enter through 513 Parnassus. Noon-1 p.m.

Cole Hall Cinema

Films are shown on Thursdays and Fridays in Cole Hall, 513 Parnassus. Prices run $2-$3.50. Movies subject to change. Call 476-2542.

May 6 at 5:45 & 8:30 p.m.
May 7 at 6:30 & 9:15 p.m.
Unforgiven.

May 13 at 5:45 & 8:30 p.m.
May 14 at 6:30 & 9:15 p.m.
Howard's End.

May 20 at 5:45 & 8:30 p.m.
May 21 at 6:30 & 9:15 p.m.
Groundhog Day.

June 3 at 5:45 & 8:30 p.m.
June 4 at 6:30 & 9:15 p.m.
Lorenzo's Oil.

June 10 at 5:45 & 8:45 p.m.
June 11 at 6:30 & 9:30 p.m.
Scent of a Woman.

June 17 at 5:45 & 8:30 p.m.
June 18 at 6:30 & 9:15 p.m.
Passion Fish.

June 24 at 5:45 & 8:15 p.m.
June 25 at 6:30 & 9 p.m.
Sommersby.

Cancer Referral Hotline

The UCSF Cancer Referral Service enables cancer patients to place just one telephone call and learn the names of UCSF doctors specializing in the kind of treatment they need. Call 1-800-888-8664.

Volunteer Orientation

Program to acquaint prospective volunteers with opportunities available in the Medical Center at UCSF in Langley Porter Psychiatric Institute Auditorium, 401 Parnassus (P), and at UCSF/Mount Zion in Herbst Hall, 1600 Divisadero (MZ). For further information call 476-1196 (P) or 885-7353 (MZ).

Tues., May 11, 9-11:30 a.m. (MZ)
Tues., May 25, 5-7:30 p.m. (MZ)
Sat., June 5. College students only. 9 a.m.-4 p.m. (P)
Tues., June 8, 9-11:30 a.m. (MZ)
Sat., June 12. High school students only. 10 a.m.-4 p.m. (P)
Sat., June 19. Volunteers ages 14-15 only. 10 a.m.-4 p.m. (P)
Tues., June 22, 5-7:30 p.m. (MZ)

Women's Programs

Events sponsored by the Women's Resource Center, unless otherwise noted. Call 476-5836 for complete list of June events.

Sat., May 1
WomenCycles III: A Conference About Menopause. $5-$25. Cole Hall, 513 Parnassus. 8 a.m-5 p.m. Call 476-5222 to pre-register.

Mon., May 10
Women in Danger. Video & discussion of trend in movies to portray extreme violence directed at women. "Deadly Images" series sponsored by Psychiatry's Women's Task Force. Rm. 7M30A, SFGH, 1001 Potrero. 11 a.m.-1 p.m. Call Deanne at 206-8426.

Sat., May 15
Advanced Electrical Repair Workshop. $45-$60. Rm. 517, Nursing Bldg., enter through 521 Parnassus. 9 a.m.-4 p.m.

Thurs., May 20
A Woman's Eye on Crime. Lucha Corpi, Elizabeth Pincus and Gloria White, three luminaries in the mystery novel firmament, discuss the mystery scene. Toland Hall, 533 Parnassus. Noon-1 p.m.

Thurs., May 27
Still Killing Us Softly: Advertising's Image of Women. Video & discussion exploring the relationship of media images to problems in society. Sponsored by the Rape Prev. Educ. Prog. Toland Hall, 533 Parnassus. Noon. Call 476-5223.

Mon., June 7
The Famine Within. Film and discussion about the relationship between sexism, eating disorders and the unobtainable image projected via fashion models. Part of the "Deadly Images" series sponsored by Psychiatry's Women's Task Force. Rm. 7M30A, SFGH, 1001 Potrero. 11 a.m.-1 p.m. Call Deanne at 206-8426.

Making Your Money Matter. Four-session series beginning Friday, May 7, at noon is co-sponsored by Academic Business Officers Group & UCSF Council. $32 for four sessions if pre-registered or $10 per session. Toland Hall, 533 Parnassus. Call 550-6111 to pre-register.

Campus Tours

All tours are free and take place at 1 p.m. on Tuesdays, May 4, 11, 18, 25 and June 1, 8, 15, 22 & 29. Meet in the lobby of Medical Sciences, 513 Parnassus. Call 476-4394.

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at UC San Francisco

Brown Bag Lectures

A series of free lectures held weekly at noon on Wednesdays at the Parnassus campus (P), Rm. 300, Health Sciences West, enter through 513 Parnassus; monthly on Thursdays in Rm. 125, UCSF-Mission Center Building (MCB), 1855 Folsom St.; and monthly on Tuesdays in Herbst Hall, UCSF/Mount Zion (MZ), 1600 Divisadero. Call 476-4394.

May 5
(See Cinco de Mayo.) (P)

May 12
An Update on Eating Disorders. (P)

May 18
Help! My Hearing Aid Lives in My Drawer! (MZ)

May 19
(See Asian Pacific Awareness Week.) (P)

May 20
Food Allergies. (MCB)

May 26
Lifetime Fitness. (P)

June 2
The Truly Supportive Human Relationship. (P)

June 9
Must Your Skin Deteriorate? A contrarian hypothesis of aging. (P)

June 15
Carpal Tunnel Syndrome. (MZ)

June 16
The Heartbeat of America. New developments regarding coronary heart disease. (P)

June 17
Vision Care for the '90s. (MCB)

June 23
The Revolution in Cataract Surgery. (P)

June 30
The Challenge of Staying Healthy. (P)

AIDS Programs

Sponsored by UCSF AIDS Health Project. For more information call 476-3902.

Living with HIV Public Forums. Call for schedule.

Individual Risk Assessments & Referrals. By appointment. Free.

Positives Being Positive. Anonymous support groups in the community for people who have tested HIV positive but have not developed symptoms of AIDS.

Other Support Groups. Drop-in & eight-week facilitated groups for men & women with AIDS or HIV infection, in a risk group or otherwise affected.

Recreation & Fitness

Millberry Fitness Center offers a great variety of classes & workshops to the community including tennis, martial arts, guitar, dance & aerobics. Summer registration for the public begins **Tues., June 15.** Also sign up children for Outdoors Unlimited Day Camps. Call 476-1115 for information & a free brochure.

Mount Zion Community Meetings

A series of meetings to keep the community apprised of activities of interest and to listen to neighborhood concerns. Held the fourth Thursday of each month. Herbst Hall, UCSF/Mount Zion. 7 p.m. Call 476-3206.

UCSF

University of California, San Francisco
Department of Public Affairs
513 Parnassus Avenue
San Francisco, CA 94143-0462

The doctor discovered a malignant tumor in her arm the size of a grapefruit.

At first, she ignored it.

But the aching in Maria Santiago's left arm persisted. She took painkillers, and hoped the problem would eventually go away.

But the problem did not go away. Maria's arm ached constantly, and the pain increased.

Months later, the swelling had become so pronounced that Maria was forced to see a doctor. The orthopaedist soon discovered a malignant tumor the size of a grapefruit. It was growing out of the cartilage at the top of her upper-arm bone. Fortunately, the orthopaedist knew of James Johnston's orthopaedic oncology work at UCSF/Mount Zion, and immediately referred her.

Johnston is among a handful of surgeons around the country who perform limb salvages. Limb salvages, which involve bone transplantation, are relatively new. Fifteen years ago, since chemotherapy and radiation do not work on this type of slow growing cancer, the only answer to Maria's problem would have been amputation — not only of the arm, but a sizable chunk of the shoulder as well.

Surgery was still required. But instead of amputation, Johnston replaced the upper six inches of Maria's upper arm bone, the humerus, with a titanium rod and a humerus from the UCSF Tissue Bank, which salvages tissue and bones from organ donors. The rod fit through the entire length of the donated bone's marrow canal and into the marrow canal of Maria's lower humerus.

The rod acts like a dowel. It holds the bones flush, end to end. This way, the bones grow together, strengthening the bond.

A titanium ball on top of the rod fit into the shoulder socket, creating the shoulder joint. To enable Maria to move her arm once the operation was complete, Johnston sutured the tendons of Maria's shoulder to tendons attached to the donated humerus.

Maria can use her arm now for most tasks. And she has a fairly wide range of motion. However, she can't lift anything heavy, or lift her arm over her head.

However, Maria's operation allowed her to keep her job as a shipping clerk at Esprit. Sometimes her arm will ache a little if she tires it out. But in all other ways, the arm is fine. And at home, Maria carries on as before, although she did decide to make life easier around the kitchen. "I bought a Cuisinart," she says.

— Marshall Krantz

(For more information on limb salvaging at UCSF, please call the Department of Orthosurgery at 476-2495.)

Tom Wachs

To Our Neighbors

May/June 1993

Saving an Arm from Amputation

New AIDS Center Opens at SFGH

Letter-Writing Program is Good for Students, Patients Alike

University of California, San Francisco
513 Parnassus Avenue, San Francisco, CA 94143-0462

UCSF

More News for You

Art for Recovery Reaches Into the Middle School

When Cindy Perlis arrives at Marin's Brandeis Hillel Day School for her monthly visit with a class of two dozen seventh and eighth graders, the children mob her, hungry for the letters she brings.

The letters, and sometimes drawings as well, are from UCSF/Mount Zion adult patients who are suffering from AIDS or cancer. The children write back, sometimes with their own drawings. And out of this communication, both the children and patients have found an understanding, a sense of purpose, and a strong bond that no one had imagined when they first started exchanging letters.

Perlis is director of Art for Recovery, a program in which she helps patients create art as a way to deal with issues that arise from life-threatening illnesses.

This newest aspect of the program took form last spring when she mounted an exhibition of patients' artwork at the Marin Jewish Community Center. Perlis offered to give students at the school, located next to the center, a tour of the exhibit.

"The children responded with such curious and innocent questions about AIDS and cancer that I suggested they write to the patients," says Perlis.

Seeing the potential benefits in an extended, two-way communication, Perlis enlisted 12 patients who were well enough to commit to corresponding with students over the nine months of the school year that began last September. Although there are other art therapy programs similar to Art for Recovery, Perlis says she knows of no other organized letter-exchange program.

About half the patients have cancer, the other half have AIDS. They range in age from 22 to 83 years old. The students choose to whom they want to write, with some students choosing to correspond with up to four patients. The patients reply to all their correspondents.

Marian Little Utley, Marin Independent Journal

In the cruelest of ironies, Brandeis student Matt Epp (right), who has been writing letters to a UCSF/Mount Zion cancer patient, learned recently that he also has cancer. He now is losing his hair due to chemotherapy. To show their support, two classmates, including Danny Jaffe (left), shaved their heads. The cancer — localized Burkitts lymphoma — is in one spot on Matt's neck. Doctors are 98 percent sure that Matt's chemotherapy program will rid him of the cancer. The months of exchanging letters with AIDS and cancer patients, coupled with Matt's diagnosis, has left the students with a more maudlin perspective on life, but also with a strong belief that cancer is not always fatal.

Crisis as Radioactive Waste Disposal Sites Close

Recent articles in the *San Francisco Chronicle* and *San Francisco Examiner* accurately described the nationwide dilemma facing hospitals and research centers in regard to the disposal of low-level radioactivity and other medical wastes, says Chancellor Julius Krevans.

Hospitals and research centers now must find new ways to store and dispose of low-level radioactive wastes in the wake of a federal law that took effect this year.

"This is a national problem, and there is an urgent need to identify several accessible and acceptable sites for these materials. In the meantime, in California, all hospitals and universities are now required to store materials locally until they are no longer radioactive," he says.

The newspaper articles reported that UCSF is considering a plan to process and store waste in a leased building at 20th and Harrison streets in San Francisco. The building is one of many sites being evaluated for the proposed waste handling and storage program.

Chancellor-designate Joseph Martin says the news accounts came before even a preliminary plan for the 20th and Harrision or any other site had been proposed.

"UCSF must explore options that are both safe and cost-effective to meet this hopefully short-lived crisis. We will seek the support of our community before arriving at any final plan," Martin says.

In addition to an evaluation of low-level radioactive waste disposal options, UCSF has begun a review of all waste handling procedures in an attempt to find a comprehensive approach. Other materials which require special handling include biological waste and chemical waste.